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The Presidential Politics of Climate Discourse: Energy Frames, Policy, and Political Tactics from the 2016 Primaries in the United States

George Brown² and Benjamin K. Sovacool^{1*12}

* Corresponding Author, Department of Business Development and Technology, Aarhus University, Birk Centerpark 15, DK-7400 Herning, Denmark

Email: BenjaminSo@hih.au.dk Tel: +45 3032 4303

1 Center for Energy Technologies, Department of Business Development and Technology, Aarhus University, Denmark

2 Science Policy Research Unit (SPRU), School of Business, Management, and Economics, University of Sussex, United Kingdom

Abstract: This study presents the results of an investigation into the frequency in which four candidates of the 2016 US. Presidential primary season communicated their political positions on climate change, and how they subsequently framed these stances in numerous contextual drivers alongside energy policies. A systematic content analysis of political debates, campaign speeches, and press statements reveals how Hillary Clinton, Bernie Sanders, Donald Trump, and Ted Cruz undertook in vote-seeking behaviour to create distinct stances on energy and climate issues. Results indicate not only partisan polarization, but also that stakeholder dynamics, control of communications and communication frequency are inter-dependent and reinforcing in generating differing climate positions. Institutional dynamics exacerbate these ‘logic schisms’ rather than providing a means of collective decision making. We test such climate discourse according to a typology of scientific, economic, national security, and moral frames. We also assess how particular frames morph over time, and are impacted by exogenous factors such as global climate change negotiations, national environmental crises (such as the Flint Water Crisis), and contestation over stranded assets and fossil fuel divestment. We find that political climate discourse must communicate to collective, bipartisan interests whilst avoiding politically divisive climate frames.

Keywords: climate change; logic schisms; political economy; discourse theory

The Presidential Politics of Climate Discourse: Energy Frames, Policy, and Political Tactics from the 2016 Primaries in the United States

1: Introduction

The 2016 U.S presidential primaries have been perhaps the most captivating election cycle since Barack Obama's insurgent victory in 2008. Democratic nominee Hillary Clinton faced challenges from the left by Independent-turned-Democrat Bernie Sanders whilst Billionaire GOP nominee Donald Trump defeated sixteen other contenders, including Ted Cruz (Jacobs et al., 2016). Voter turnout in the primary cycle rivalled that of 2008, with Republicans seeing record numbers and Democrats experiencing a higher than usual number of participants (DeSilver, 2016).

The election cycle has been criticised for its lack of coverage on climate change issues (Kalhoefer, 2016). Concerns for the economy, healthcare, employment, and national security seemed to represent the most salient issues to both Democrats and Republicans. Polling data suggests that both parties regarded climate change as 'below average in importance'. Nonetheless, climate change is the single most discrepant issue tested, with Democrats' importance rating 48 percentage points higher than Republicans' (Gallup, 2016).

The political discourse of climate change has split policymakers between the convinced and sceptical camps. It has been argued that such discourse has led the climate debate to a new plateau of polarization where meaningful dialogue between participants has been found wanting (Hoffman, 2011). Such logic schisms (Hoffman, 2011) present significant barriers to climate and energy policy. If policymakers are to overcome these logic schisms, it is important to understand how the intentions of agency behaviour shape climate change stances and what the consequences for policymaking are. Presidential election cycles are thus the opportune time to keep one's finger not only on the political pulse of America, but other places where populism and post-truth politics are on the rise (Janda et al. 2017)

This study presents the results of an investigation into the frequency in which four candidates of the 2016 US. Presidential primary season communicated their political positions on climate change, and how they subsequently framed these stances within numerous contextual drivers. Ted Cruz; Donald Trump; Hillary Clinton and Bernie Sanders were the most successful candidates by vote share in each party adding legitimacy to their climate positions. Although the primaries did not receive as much political coverage as the general election, the investigation itself still offers insight into how political actors may genuinely stand on climate issues as nominees often converge to the centre after winning the primaries (Hummel, 2010). Discourse, framing and content analysis reveal how vote-seeking behaviour shapes the presidential candidates' climate change stances. The study develops a

basic taxonomy developed of four issue categories with two dichotomous frames per category for source analysis. This highlights the key differences between the candidates whilst broadly capturing both sides of the logic schism. The study examines the results of the investigation and indicates towards partisan polarisation. The frequency in which the candidates invoked a climate frame reveals differing climate communication strategies. Identifying the most often-communicated climate stances also uncovers how the campaigns attempted to win votes by appealing to stakeholders in specific frames.

Lastly, the study contextualises political climate change discourse and identifies three drivers: the 2015 United Nations Climate Change Conference (COP21), The Flint Water Crisis and Clinton's "Greenpeace Gaffe." This serves to go beyond the counting of frames to demonstrate discursive tactics in action. These 'frames in motion' contextually evolve within stakeholder sensitivities and shape climate narratives and agency influence accordingly. As such, the study reveals how important the political campaigns regard the need to control their climate stances in both unforeseen and predicted circumstances and how this may hinder or advance climate policy development. Significantly, institutional-stakeholder dynamics, control of communications and communication frequency are inter-dependent and reinforcing in generating differing climate positions. Such a relationship exacerbates the current logic schism between policymakers. The implications of such a study make a case for political climate discourse to develop 'broker categories' in which climate positions can be collectively communicated between seemingly polarised interests and narratives. National security is offered as a means of potential reconciliation and the discourse surrounding this must be deliberative in order to promote consensus driven politics and raise public awareness, bringing more stakeholders into the discussion.

2: Political Communication, Discourse, Content Analysis, and Frames

This section of the paper presents our key conceptual approaches, namely those of political communication, discourse, content analysis, and frames. Thus, the framework utilized in this study is the result of synthesising several literatures. Political communication and political economy literature provide the assumption that all candidates seek power and communicate policy stances to gain votes. Content analysis reveals the extent to which candidates regard the issue of climate change as a source of political capital, denoted by the frequency in which the issue is raised. Discourse analysis and framing literature reveal how the candidates communicate a narrative by specifically constructing climate stances to engage specific stakeholders. How candidates employ certain frames will ultimately uncover whether candidates frame their stances different in context specific situations in order to maximise political capital.

2.1 Political communication

We begin by drawing from political communications literature to illuminate the machinations and intentions of agency behaviour and source material. Denton and Woodward state that ‘the crucial factor that makes communication ‘political’ is not the source of the message, but its content and purpose’ (1990, p.11). ‘Content and purpose’ allude to embedded interests; namely, what the sender’s intentions in influencing the political arena are. McNair describes this intentionality of political communication as ‘purposeful communication about politics’; arriving to the conclusion that communications undertaken by political actors are for the purpose of achieving specific objectives (McNair, 2011, p.4). This conception of political communication lies in the standard assumption of political economy: that leaders act with the goal of maintaining or achieving power (Victor, 2009). To contextualise the abstract, this statement is true for all presidential candidates as they are significantly motivated by the possibility of winning elections (Hummel, 2010). Presidential elections have especially strong incentives to pursue vote-seeking strategies because candidates must win a large portion of the national electorate (Samuels, 2002). An explanation of candidate’s behaviour is developed: candidates communicate climate stances in an attempt to convince the electorate that they are the best suited contender to serve as President.

2.2 Discourse and logic schisms

Despite the apparent settling of the debate within the academic sphere the understanding of climate change within the public and political realm remains unresolved (Hoffman, 2011, p.8). Discourse analysis is useful in identifying and comprehending a political actor’s understanding of anthropogenic induced climate change. We take Adger et al’s. (2001, p.683) definition that discourse represents ‘a shared meaning of a phenomenon’. Phenomena vary in magnitude and may be understood by small or large groups of stakeholders on levels ranging from the local to the international. The actors devoted to a discourse participate in varying degrees to its influence by transforming, promoting and reproducing through written and oral statements. Such a constructivist approach uses an ‘anti-essentialist ontology [assuming] the existence of multiple, socially constructed realities rather than a single reality... and puts emphasis on the communications through which knowledge is exchanged’ (Hajer and Versteeg, 2005, p.176). Nietzsche’s statement that ‘there are no facts, only interpretations’ (Dean, 2006, p.29) is insightful because actors have differing conceptions of reality, rather than objective facts. These shared meanings are indicative of subjective worldviews (Sovacool, Brown and Valentine, 2016, p.332), representing a particular way of viewing the world and defining what is possible. Thus, for stakeholders, discourse captures the problems and their necessary solutions (Rafey and Sovacool, 2011, p.1142).

Given the scientific consensus on climate change, we have polarized the discourse into two distinct camps – those that hold to the worldview of anthropogenic climate change and all other views. Hoffman (2011) proposes that a “logic schism” - whereby competing worldviews hold no common values and beliefs - exists concerning the debate on anthropogenic induced climate change. Such schisms ‘arise due to linguistic and value differences that lead to positions that are relatively exclusive, rigid, inelastic and restricted’ (Hoffman, 2011, p.8-9). The result leading to both sides talking past each other. Hajer and Versteeg (2005) argue that a discussion (the object of discursive analysis) is subject to democratic quality, known as ‘deliberation’. A phenomenon can have ‘deliberative quality if it is inclusive, open, accountable, reciprocal and integer and when the various participants can learn through iterative dialogue’ (Hajer and Versteeg, 2005, p.176). Logic schisms in part arise from a lack of deliberation in discourse and if meaningful climate policy is to transcend such barriers, discourse and climate politics need to be consensus orientated. Easier said than done. Partisan polarization - the homogenisation of policy positions and increasing differences between party stances on major political issues, is increasing (Layman, Carsey and Horowitz, 2006). Hoffman (2011, p.20) offers ‘broker categories’ - worldviews that hold common ground; in order to bridge the schism to difficult issues. At the same time, these categories need to be non-threatening (deliberative) in nature so as not to be immediately dismissed out of hand by competing stakeholders.

2.3 Content analysis

Relatedly, content analysis is useful in understanding how actors use language to mobilise key stakeholders, shape public opinion and build consensus on solutions whilst sustaining media attention on the specific issue (Fletcher, 2009).

Content analysis is the systematic classification and description of content according to certain pre-determined categories. Content analysis can both quantitatively and qualitatively analyse source material rendering it a useful tool in tracking media depictions and textual content of an issue (Berger, 2016). Quantitative content analysis is primarily concerned with counting and classifying the occurrences of the phenomena under investigation, involving frequency counts of key words (Treadwell, 2011; Sovacool, 2014). Qualitative content analysis is the subjective interpretation of the content of text data through a systematic classification process of coding and identifying themes or patterns. It attempts to analyse language in order to classify text into an efficient number of categories that represent similar meanings (Hsieh and Shannon, 2005).

2.4 Energy frames and media framing

Our final conceptual tool is that of a “frame” or “framing.” Sovacool, Brown and Valentine (2016, p.4) state that frames underpin differing conceptions of reality, influencing how knowledge is shaped, conditioned and digested. Frames therefore represent the organisation of collective interests and normative assumptions - a worldview of an issue (Sovacool and Brown, 2015; Valentine et al. 2017). This means the notion of a frame cuts across political communication, discourse, potential logic schisms, and content. The candidates communicate their constructed realities in particular frames to mobilise stakeholder interests. Frequently communicating in specific frames reveals how the candidates wish to win votes from targeted stakeholders, demonstrating how useful the frame is as a source of political capital.

In identifying an energy frame in this study, the logic follows that the campaign perceives this interpretation as an opportunity to stimulate engagement with specific stakeholders. We use the analytical perspective of boundary framing to construct a taxonomy of what types of frames the candidates communicate. This process is used to define a contextual boundary of what falls “inside” and “outside” the communicated frame. Boundary framing therefore involves the assessment of how the phenomena is demarcated (Fuller and McCauley, 2016), something explored in the next section.

3. Research Design: Towards a Taxonomy of Climate Change and Energy Frames

To analyse the issue of climate change within the 2016 primaries, data were collected from presidential debates, campaign speeches and press releases and statements. With the acknowledgment of vote-seeking behaviour, these sources were where the candidates had the most control in how climate stances were presented to stakeholders. It is for this reason that interviews were not included as a form of source for analysis. At the mercy of the interviewer, candidates may be forced to answer questions regarding under-developed policy stances or issues that they are uncomfortable in elaborating. Although interviews may reveal more about the candidates’ stances on issues *because* a direct question requires a response and subsequent dialogue, the aim was to see if candidates chose to mention climate change themselves. This fits with the developed framework in relation to the frequency in which climate positions are regarded by candidates as a source of political revenue.

Despite the primaries formally opening in February 2016, candidates had been campaigning for over half a year prior to this. The study starts with Ted Cruz’s announcement to run for president, on the

23rd of March 2015. The period is finalised on 8th June 2016 when Clinton effectively won the Democratic nomination after the California primary.

Debate and speech transcriptions were found from internet sources such as C-SPAN and The Washington Post and The American Presidency Project. Press releases were found at the campaign websites. Keywords used to find such instances were: “Global Warming”; “Temperature”; “Carbon”; “Green House Gases”; “Climate” and “Environment”. Climate stances may be simultaneously communicated in multiple frames. In such an occurrence, each frame was counted and coded in order to best reveal which forms of communication the candidates regarded were the most appropriate to appeal to stakeholders. Frames were also coded multiple times if they were used more than once in any given source. A total of 561 sources were initially gathered over the time period and the final dataset was narrowed down to 134 sources that included one or more instance of climate change.

The first type of source were primary debates. These represent the formal presentation of candidate’s policy stances in a politicized arena. There are similarities to debates and interviews and including the debates somewhat contradicts the previous statement of candidates having complete control over their communications. But it would be an error to omit the most accessible manner in which candidates communicate their climate stances because campaigns need the audiences that televised debates afford (Kraus, 2000). The primaries allow candidates the opportunity to tour the country giving speeches making it logical to analyse such source material in order to discover the frequency that they raise the issue of climate change. Noting the geographical location of noteworthy speeches is important as it alludes to the voter demographics which may reward the candidate with the most attuned climate policies, contextualising stakeholder sensitivities. Press releases are the most accessible form of source as they appear on all of the candidates’ campaign websites. Their intentionality is clear as they are designed to advertise the candidate’s campaign. Although Denton and Woodward (1990) downplayed the importance of the form of the source, it is argued that some sources have larger political implications than others due to the amount of coverage a particular source will receive. For example, a serious blunder in a press release will receive relatively little attention outside of the most politically engaged circles than would the same blunder in a televised debate broadcast to millions of people.

A taxonomy of climate frames provided the coding schema for the study's analysis. The developed coding key is drawn from Hoffman’s (2011) ‘issue categories’ which were used to identify frames within sceptical and convinced periodicals. Hoffman (2011, p.10) identifies seven categories: science, risk, technology, economics, religion, political ideology and national security. Because framing

analysis was used only to serve as a template to structure the content analysis, a simplified version of Hoffman's (2011) work is implemented here.

A decision was made to omit religion as no candidate directly appealed under this paradigm. The instances when political ideology was communicated was under the science frame in an attempt by Democrats to contrast their acceptance of climate change with the Republican's rejection. Although technology is intrinsic to climate policies, it is argued that this is a matter of energy policy rather than climate policy. Energy policy is explored to implicitly uncover climate stances, illustrated in Section 5. Risk and national security were combined in this study. As a result, four categories comprising of eight frames (two frames per category) formed the taxonomy for the coding schema. Each category can be framed in a way that makes the case for climate change mitigation or non-action. This polarisation enables the method to capture both sides of the on-going logic schism. A limit to this methodical approach should be noted: the possibility of omitting nuances within the discourse exists which may be traced back to the somewhat absolutist polarization of the categories. Although, as Hoffman (2011, p.5) points out, when no common debate is to be found, one may speculate if any nuances within the debate can exist given the current polarization of party discourse.

3.1 Science (Certainty and Uncertainty)

Scientific certainty underpins the diagnosis of all the candidate's positions on climate change. The logic schism starts here. Whether climate change is regarded as *scientifically certain* or *scientifically uncertain* shapes the candidates' divergent views. Whenever a candidate would invoke the science of climate change, in an attempt to confirm or refute it, the instance was accordingly coded as a science frame. In a similar manner, a simple comment of (dis)belief in climate change was regarded as a primer to discover what side of the scientific fence the candidates came down on.

3.2 Economic Performance (Investment and Cost)

Candidates economically framed climate change in either terms of *investment* or *cost*. Climate change could be framed as an opportunity of investment through mitigation policies, encouraging growth and saving larger costs in the future by rejecting a high discount rate. By contrast, environmental regulations could be regarded as barriers to growth or questioning if mitigation is cost-effective. A high discount rate is therefore acceptable in this interpretation.

3.3 National Security (Interventionists and Isolationists)

Security is "an accentuated discourse on vulnerability" (Barnet, 2003, p.1), socially constructed rather than objective, it is attached to what is regarded as the most vulnerable of entities such as the

nation; property; income; and basic needs (Kester et al. 2017). Defining particular risks is a political one (Waever, 1995), but Fletcher (2009, p.808) points out that security provides Republicans and Democrats the opportunity for cooperation on climate change mitigation legislation. The ultimate concern of environmental security discourse is the present and future welfare of humankind with the understanding that maintaining the ecological orders that sustain humanity is indispensable (Mulligan, 2010; Westing, 1986; Reuveny, 2007). Given the context of the primary elections, environmental securitisation is examined under the lens of national security (income and property were included in the economic frame) as the candidates would use discursive tactics to persuade stakeholders on the priorities involving the nation's security – alluding to a realist perspective.

The *interventionist* regards climate change as a threat to national security and therefore seeks to mitigate these aforementioned implications. A sense of existentialism is included here, the risk being so great that inaction verges on the suicidal, with the need to 'combat' climate change being of great importance. The category also involved aspects of international relations, attempting to persuade other nation states to act in the interests of U.S. security is considered an international aspect of interventionism.

By contrast, the *isolationist* would reject these notions: climate change is not seen as a national security risk so no mitigating action is required (presumably following a scientifically uncertain frame). Climate refugees are not legally recognised (Biermann and Boas, 2010) and subsequent immigration policies can address migration issues. Nor should the USA have to involve itself by solving developing nations climate related issues at its own expense. Actors may use discursive tactics to downplay the risks of climate change whilst simultaneously constructing supposed higher risk issues such as terrorism and nuclear proliferation. Rejecting international agreements under claims that it undermines national sovereignty are also isolationist principles.

3.4 Moral Predicament (Obligated and Agonistic)

Although omitting Hoffman's (2011) religious category, a moral category was used as an alternative. The *morally obligated* framed climate change mitigation in tones of environmental justice, inter-generational justice, the inequality of burden sharing and ending fossil fuel exploitation of workers and the environment. The *morally agnostic*, a somewhat IR realist perspective, see no such obligation if other countries refuse to lower their emissions. A rejection of the science of climate change also liberates them from all moral obligations.

4: Results and Discussion: Contextualizing Political Climate Change Discourse

This section presents and discusses our results. It both analyses the initial findings of the investigation with an emphasis on how discourse and frames changed over time, and it also investigates particular events that spurred climate communications. This presents the opportunity to examine how agency behaviour was influenced by unfolding political events or points of controversy. Three key events were identified that generated a prolonged discussion on climate change mitigation. The Paris COP21 talks in early December; the Flint Water Crisis in March; and Clinton's Greenpeace gaffe in April. Such an analysis was able to tease out the discursive tactics in action, recognising that particular frames and how frequently they are communicated within the political landscape shape climate narratives and agency influence.

The second half of the section shows the influence of institutional dynamics and how attempts to control climate communications raises implications for agency and stakeholder behaviour. 'Morphogenetic cycles' (Archer, 1982) describe the relationship that institutional dynamics have with stakeholders and political actors. The structural conditioning of actors by rules and institutions is influenced by institutions' (in this case the political parties) responsiveness to stakeholder concerns. Actors or stakeholders may seek to influence this conditioning through social interactions and discursive strategies, attempting to change an institution's narrative. This in turn will shape agency behaviour and stakeholder perceptions. Cyclical in nature, these dynamics are ever in process and have implication on how climate policies may evolve over time.

4.1 The temporal dynamics of energy frames and climate discourse

Almost a quarter of the sample contained instances of climate change. The frequency in which the candidates mentioned and framed the issue varies substantially. Some candidates regarded climate change as a salient issue and their subsequent position as a vote winner whilst others did not. Table 1 breaks down this frequency by candidate and source material and Figure 1 illustrates this. Out of the 134 sources that contained one or more instance of climate change, Sanders communicated and framed climate change by a significant margin when compared to the others. His total number of source instances and frequency is more than double his nearest opponent, Clinton. Sanders' total count of climate frames (184) is more than the other candidates combined; accounting for 62.37% of all climate instances. Sanders is also the only candidate to mention climate change in all of the debates whilst Cruz does not meaningfully communicate about climate change in any.¹ Similarly, of the campaign speeches analysed for Cruz, no instance of climate change was discovered. The only instances of climate change that Cruz communicates are found within press releases. The results

¹ Cruz attempts to discuss climate change in 4th Republican debate but cut off by moderator and other candidates: "...when it comes to climate change....", not counted as frame not revealed.

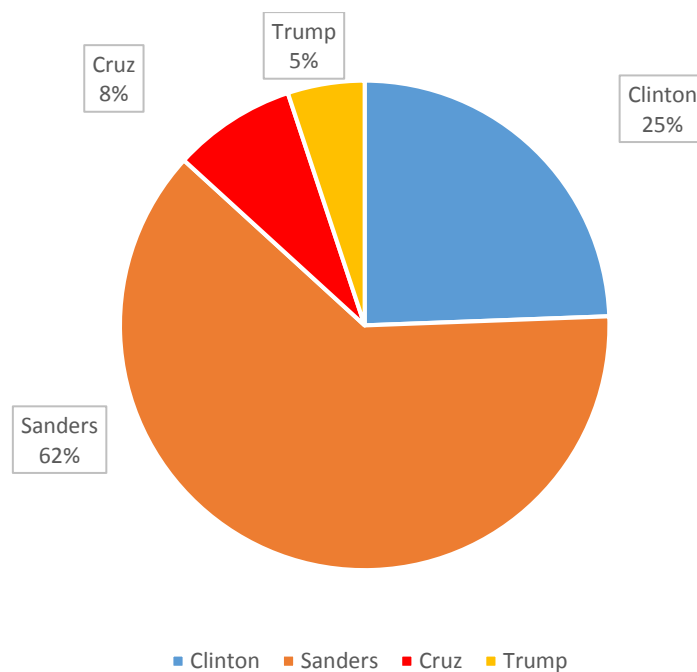
seem to fall under party lines, both Democratic candidates top the list whilst the Republicans pay lip service to the issue and form the bottom half. Such results contribute to the importance of party politics influencing climate change saliency (Farstad, 2016).

Table 1. Frequency that Presidential Candidates Mentioned Climate Change by Type of Source

Candidate	Debates	Campaign Speeches/Remarks	Press Releases/Statements	Total
Clinton (D)	11	26	35	72
Sanders (D)	25	50	109	184
Cruz (R)	0	0	24	24
Trump (R)	3	7	5	15
Total frequency count for instances of climate change by source	39	83	173	Sum of all Instances 295

Source: Authors

Figure 1. Frequency that Presidential Candidates Mentioned Climate Change



Source: Author's Compilation

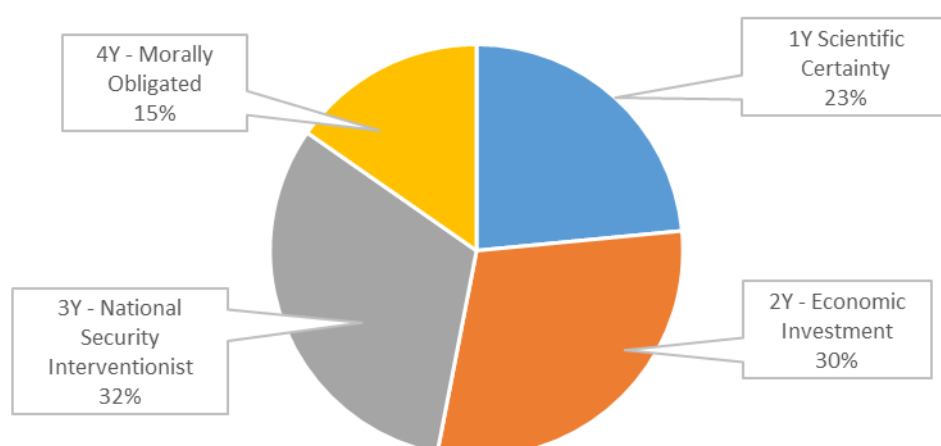
Both Cruz and Trump do not mention climate change at the start or end of the period of investigation, whilst Sanders and Clinton are consistent in climate mentions. Climate communications increased as the primaries intensified. By temporally tracking the frequency of climate communications, one can see where the campaigns were most active in framing climate change. Out of the sixteen-month period, the most activity regarding the issue is between December 2015 and May 2016.. As the primaries formally opened in February 2016, intense campaigning evidently took place in the build-up prior to this and was sustained for six months. Communications activity dropped when the primaries were effectively over. Cruz terminated his campaign in May whilst the investigation ended in June, which may have affected the average drop in frequency in the later stages. Given the low frequency count, it is more likely that this drop was due to less activity from the Sanders campaign rather than the Cruz campaign. Cruz and Trump are almost similar in their silence on the issue. This in itself speaks volumes. Both campaigns did not consider the climate change debate as an opportunity to win votes due to the low climate communications frequency. This is a reflection on the candidate's own interests and priorities as well as an acknowledgment of the strategic implications in communicating the issue of climate change to specific stakeholders - Republican Party members. This agent-stakeholder duality is further explored in the next section.

Figure 2 shows the breakdown of frames that the candidates used over the period. The national security interventionist frame was the most used by the Democrats, suggesting that both appealed to voter concerns of the risk of climate change. Whilst Sanders invoked scientific certainty as a close second, Clinton economically framed the issue to an almost equal weighting. This suggests that Sanders was intent on raising awareness to climate change whilst Clinton attempted to appeal to the economically concerned by framing climate mitigation as an opportunity to create renewable energy jobs. The economic frame is also the largest variance between the two Democrats, Clinton's 30% to Sanders' 11% reflects the difference between the two candidates' priorities. Sanders was almost twice as likely to frame climate change as a moral issue than an economic issue, whilst the reverse can be said for Clinton. The implications of prioritising the use of one frame over another have consequences for stakeholder engagement.

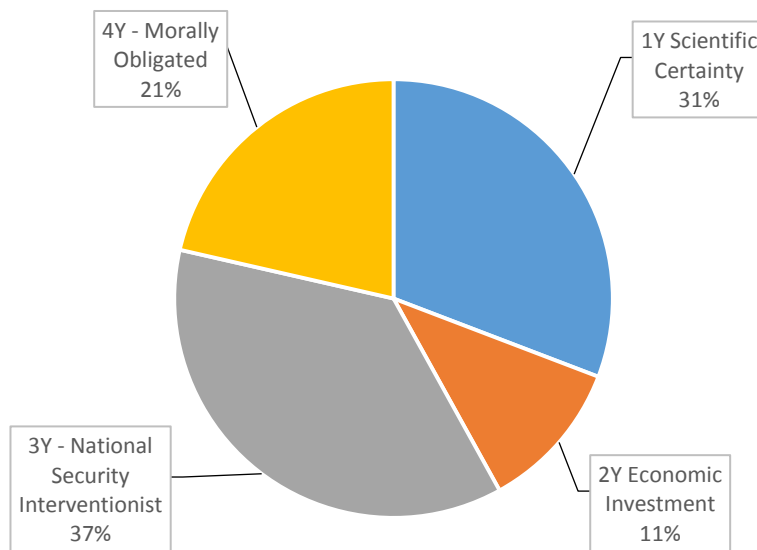
For the Republican candidates, no moral frame was identified, presumably because as Trump and Cruz rejected the climate science there was no moral obligation to address the issue. The Cruz campaign constructs its climate narrative that rejects the science as 71% of instances are framed with scientific uncertainty. Trump mostly communicated the issue as an economic burden by framing mitigation policies as barriers to industrial growth. Given the low count of climate mentions by the Republican candidates these frames are somewhat limited in confirming these assumptions. Although the scarcity of the data is revealing in how the candidates view climate policies as political capital, more data would have helped solidify these inferences.

Figure 2: Climate Change Frames for Clinton, Sanders, Trump, and Cruz

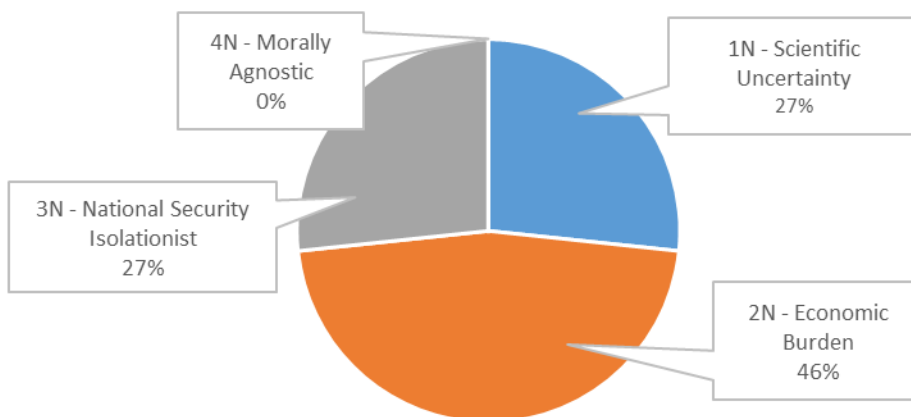
a. Upper left panel: Clinton



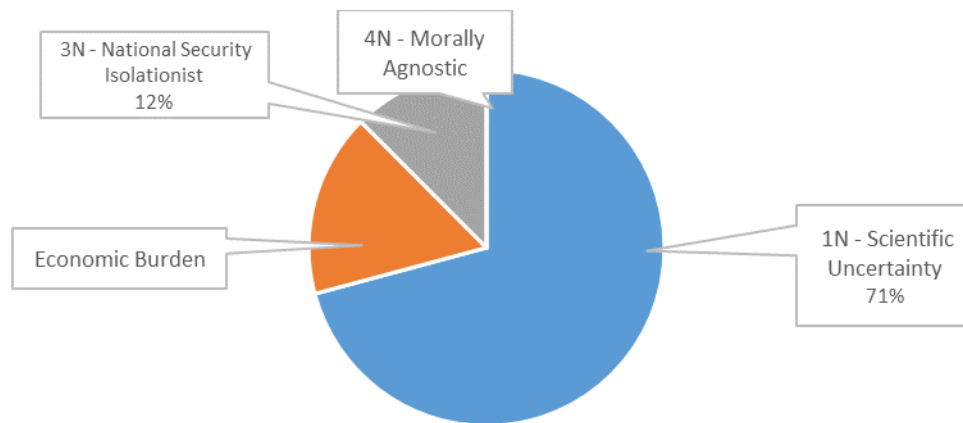
b. Upper right panel: Sanders



c. Bottom left panel: Trump

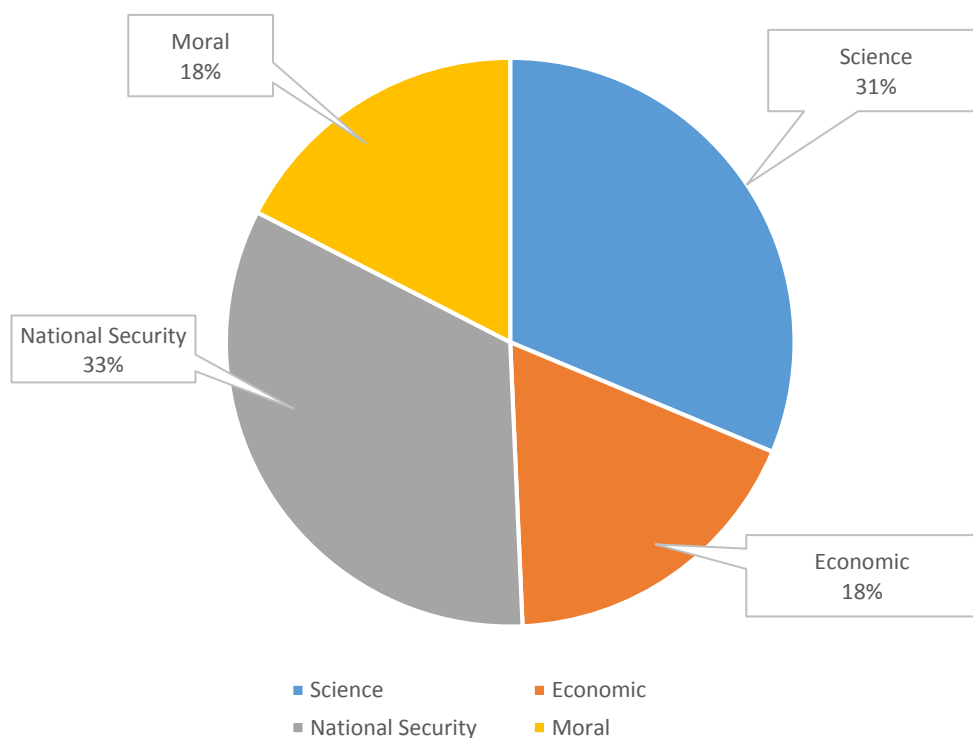


d. Bottom right panel: Cruz



Source: Authors. When considering the total frames used by all candidates Figure 3 illustrates that the national security category is slightly leading as the frame most communicated.

Figure 3: Frame Categories within Climate Change Discourse

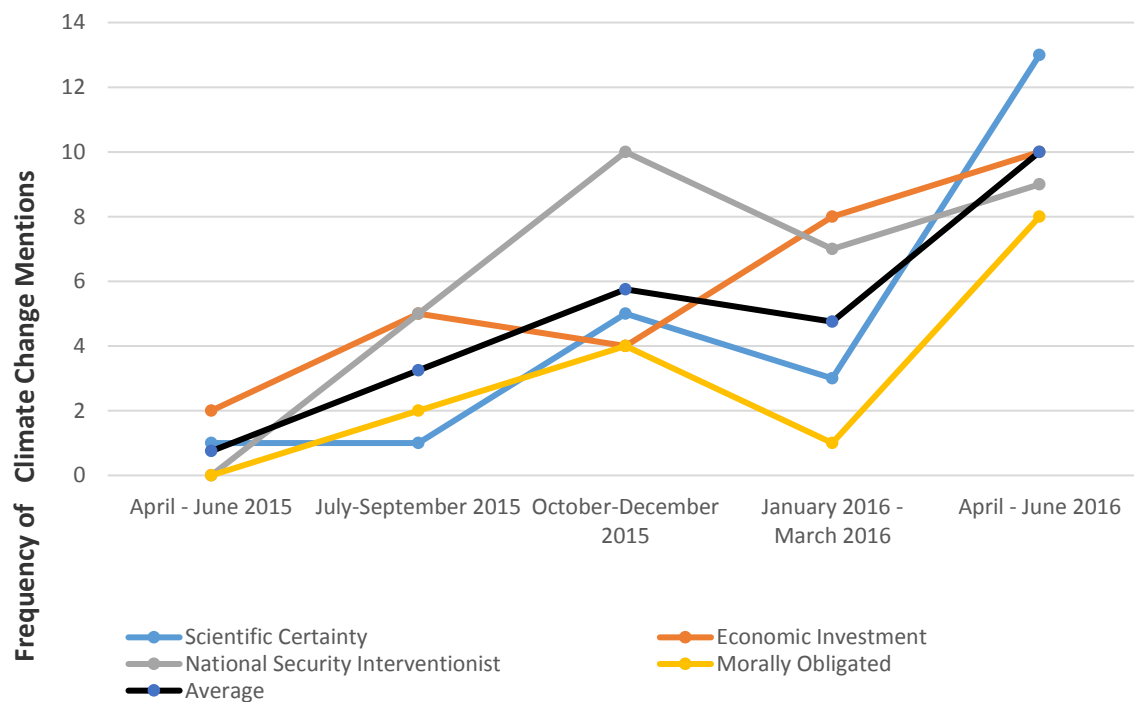


Source: Authors It is worthwhile to temporally track the different frames each candidate communicated over the period. A spike in a particular frame would be indicative of a contextual driver that necessitated a subsequent response in the framing of climate stances. Figure 4 shows the

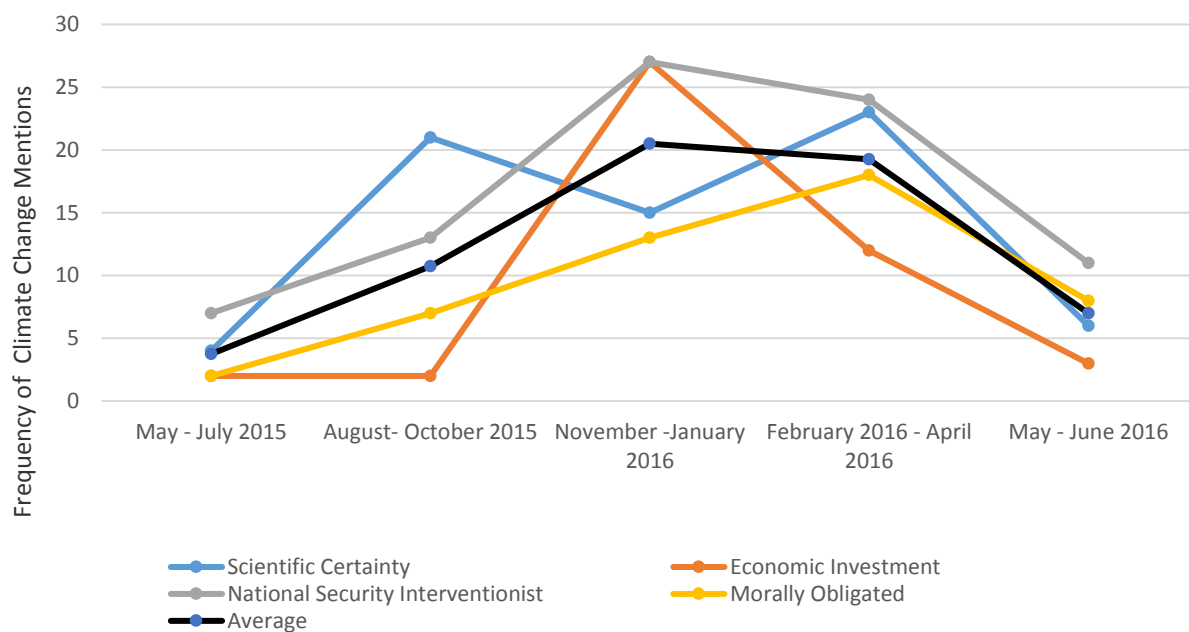
candidates' frame progression over the period. For Clinton, both the economic and science frames have remained present throughout the period and climate communications on average increased in the last few months of 2015. Despite a dip in average at the start of 2016, the Clinton campaign increased its climate communications in the last period. These increased climate communications suggest the Clinton campaign adapted to several contextual drivers.

Figure 4: Progression of Presidential Candidate Views on Climate Change for Clinton, Sanders, Trump, and Cruz

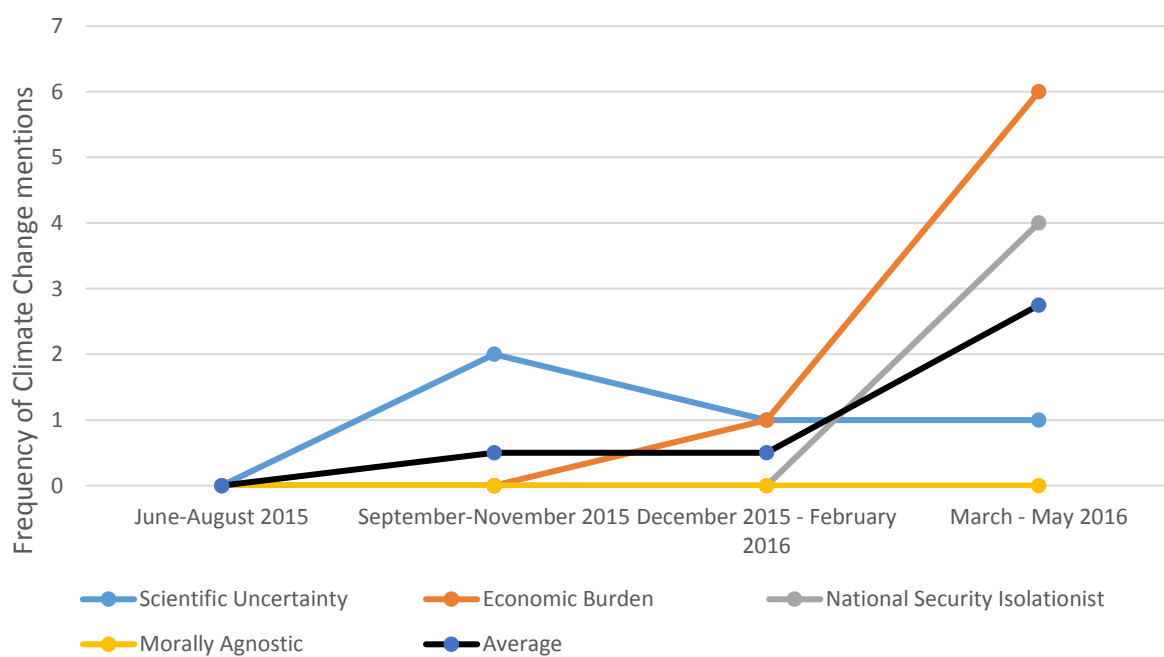
a. Upper left panel: Clinton



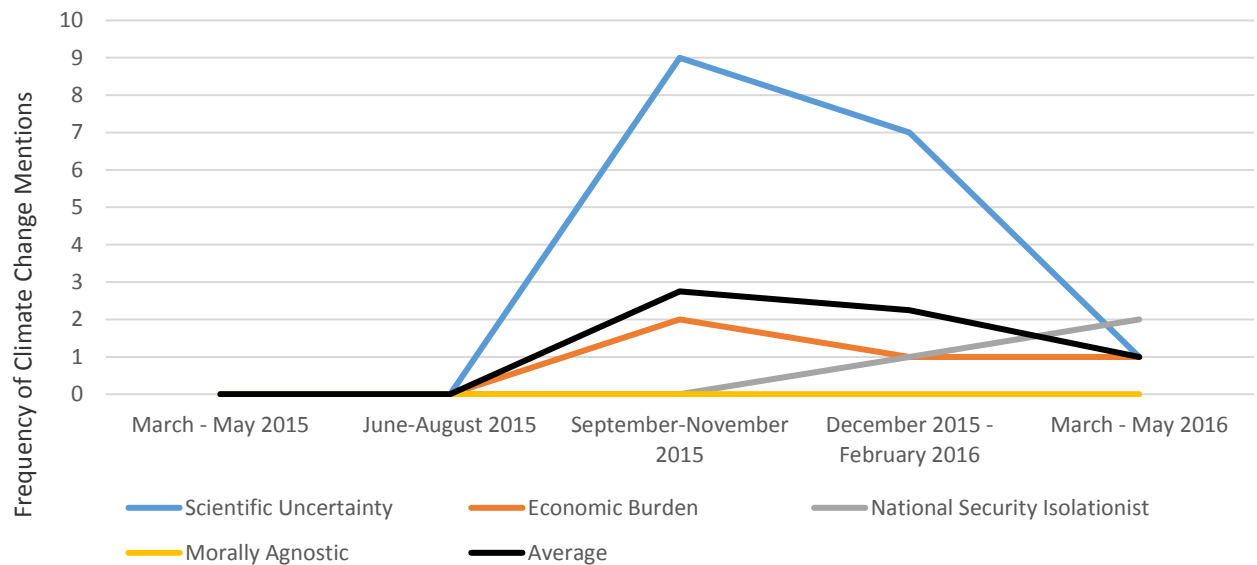
b. Upper right panel: Sanders



c. Bottom left panel: Trump



d. Bottom right panel: Cruz



Source: Author's Compilation

The Sanders frame progression is less neat than Clinton's. Emphasis must be placed on the frequency in which the frames are invoked, both start with low frequency counts for all frames but Sanders vastly out-communicates Clinton throughout the period where communications activity was most lively. As the primaries intensified, the Sanders campaign increased communications and reached a peak average of 20 and which, unlike Clinton, is sustained by a significant margin until April. In contrast to Clinton who experienced a rise in frame frequency in the final period, communications from the Sanders campaign drops off. This may be due to the final death throes of the Sanders campaign. However, it is emphasised that Clinton enjoys a whole month more than Sanders when assessing these values, somewhat skewing the comparison.²

Due to the relative lack of data both Republican cases are limited in their analysis, but like the Democrats, there is increased communications activity at the height of the primaries. There are large spikes in the science frame for Cruz and the national security and economic frames for Trump. If the norm of communications is low, these anomalies warrant exploration for contextual drivers in order to uncover what forced the campaigns to communicate their climate stances. In a similar manner to the Democrats, the presumptive nominee increased communications at the end of the period whilst the loser's campaign dropped in activity.

4.2 Global climate change negotiations as a landscape pressure

The annual COPs are political media events with over 180 nations involved; making it important to recognise the convention's significance in international relations and climate change mitigation

² Clinton started her campaign one month before Sanders, allowing for an extra month at the final period.

(Sosa-Nunez and Atkins, 2016). COP21 provided increased coverage on the issue of climate change and the climate communications present the opportunity to uncover how each campaign consequentially framed their climate positions.

Sanders released four press releases over the period of the Paris Summit. The first two of these releases were the 'proposal' and 'release' of his 'People before Polluters' Climate Plan (no.65 & no.66). The timing is not coincidental, as more public attention was afforded to the issue of climate change through sustained media coverage, the Sanders campaign attempted to draw attention to its own climate plan. The title is revealing as the notion of '*People before Polluters*' is grounded in morality (Čapek, 1993). As such, the Sanders campaign presents a dichotomy between environmental and public well-being on one side and the interests of fossil fuel companies on the other. Such views are communicated via press release:

The United States must lead the world in working with China, Russia, India and the international community to break our energy dependence on fossil fuels...While fossil fuel companies are raking in record profits, climate change ravages our planet and our people – all because the wealthiest industry in the history of our planet has bribed politicians into ignoring science (no.65)

This climate narrative is constructed in national security, morality and science frames. Sanders' populist Manichean discourse presents stakeholders an ultimatum of choosing a side. The interventionist and moral frames present a sense of urgency to the situation. This is supported by Sanders' Press Release stating that the 'Paris Accord Goes Nowhere Near Far Enough' and critiques the COP21 as unable to provide 'bold action' (no.67). Sanders' absolutist terms are appealing to many feeling disenfranchised from the political process and his anti-establishment rhetoric is particularly appealing to the young (Kawashima-Ginsberg et al., 2016). This appeal is understood by Sanders as the last press release around COP21 was a notification that he was to meet with students to discuss his 'newly released plan to combat climate change' (no.68).

The Clinton campaign framed COP21 in a different manner to Sanders. A press release considered COP21 an 'ambitious international climate agreement' and 'a historic step' (no.10) the same day Sanders thought it too weak. Clinton framed COP21 (alongside her prior involvement as Secretary of State during Copenhagen's COP15 summit) as evidence of leadership qualities in working towards multilateral agreements. Clinton therefore uses COP21 as a cornerstone of her green credentials and the summit is invoked a further 9 times throughout the investigated period. This is best seen in the Florida debate: 'the Paris agreement was a huge step forward in the world, that Senator Sanders said was too weak, but I helped to lay the groundwork for that' (no.17). Presenting the Paris talks as an international success and a significant accomplishment of the Obama administration, Clinton styles herself as a continuation of the Obama regime. Obama has an 86.7% approval rating amongst

Democrats (realclearpolitics.com, 2016) and so it is politically intuitive for Clinton to appear as his successor. The objective is an attempt to alienate Sanders from party insiders.

The Republican candidates have an opposite narrative to that of the Democrats. In a press release titled 'Sen. Cruz Confronts the Dogma of Climate Change Alarmism', 7 in 8 frames were identified as scientific uncertainty. The Cruz campaign constructs the narrative by diagnosing the reality of the issue in the opposite manner to the Democrats, arriving to a different prescription, supported by studies findings in Fig. 5d. The other frame was an insinuation that the threat of international terrorism is more serious than climate change, an isolationist frame. COP21 was somewhat overshadowed by the Paris attacks and this is an example of the Cruz campaign appealing to the voter base by downplaying the risk of climate change and diverting attention to other national security concerns. A subsequent press release in April 22nd 2016 titled 'Sen. Cruz Rebukes Paris Climate Agreement' – where Cruz argues that the USA should focus on 'real national security threats, rather than partisan dogma' (no. 127).

In his energy plan speech, Trump states that COP21 'gives foreign bureaucrats control over how much energy we use... We're going to cancel the Paris Climate Agreement and stop all payments of U.S. tax dollars to U.N. global warming programs' (no.134). Trump sees such international treaties as undermining American sovereignty, the isolationist frame that fits the campaign's nationalist rhetoric. He considers environmental regulation as a barrier to economic progress: 'The Environmental Protection Agency's use of totalitarian tactics forces energy operators in North Dakota into paying unprecedented multi-billion dollar fines' (no.134). Considering this speech was made in North Dakota, a state heavily dependent on the fossil fuel industry, it is politically intuitive that climate mitigation is framed via energy policy as a threat to stakeholder livelihood. Clearly, energy policy (and therefore proposed climate policy) are considerably influenced by stakeholder interests.

The differences in communicated narratives of COP21 reveal much on the climate positions of all candidates. Sanders makes a case through the urgency of interventionist and moral frames whilst Clinton prefers to frame the issue in terms of achieving results by securing national interests. The Republicans paint the opposite picture as Cruz rejects the climate science and attempts to divert voter attention to other national security threats. Trump in a similar manner sees international climate mitigation as undermining American sovereignty and an impediment to domestic energy jobs. All candidates invoke the national security category meaning the political actors are aware that stakeholders respond to policy framed in security interests. Getting political actors talking through the same category is a first step in reconciliation.

4.3 The Flint Water Crisis and sensitivities to vulnerability

The ongoing Flint Water Crisis has disproportionately affected socioeconomically disadvantaged neighbourhoods. Water was identified as a growing source of childhood lead exposure because of aging infrastructure (Hannah-Attisha et al., 2016). The crisis is not about climate change per se, but the imagery of the contamination of natural resources, and children as the victims, leads the electorate's mind to environmental and resource policy making. An examination of the party debates in Michigan reveals how this imagery influences the discussion on climate change and how sensitive actors are in framing their positions within stakeholder contexts.

Differences between the candidates' stances on fracking and environmental management were contextualised in the Democratic Debate in Flint.

Climate change has been a major talking point for both of you...Fracking can lead to environmental pollution including, but not limited to, the contamination of water supply. Do you support fracking? (no.16)

Institutional-stakeholder dynamics are influential in how the candidates communicate their stances given specific stakeholder sensitivities. It is clear that such sensitivities have shaped the Democratic Party's decision to uncover the candidate's energy policies (implicitly revealing their climate stance). The consequences of appearing cavalier with the concerns of contaminated water (by association with support for fracking) could alienate potential votes. These dynamics shape candidates' communications as they try to control and adapt their narrative to recognise these sensitivities. This is most evident for Clinton as she attempts to juggle her support for fracking whilst remaining conscious of this. The discourse reverts to the interventionist frame: 'I worked with President Obama during the four years I was secretary of state to begin to put pressure on China and India and other countries to join with us to have a global agreement which we finally got in Paris' (no.16). Clearly unwilling to expose her fracking stances to further critique, Clinton adapts and steers the debate to a more controlled line of communications by using the interventionist frame to project capability and awareness of national and local issues.

Sanders is more absolutist in his positioning to Clinton: 'my answer is a lot shorter [than Secretary Clinton's]. No, I do not support fracking' (no.96). Sanders then uses this as the springboard to communicate his climate change stance: 'I'm glad you raised the issue of climate change, because the media doesn't talk enough about what the scientists are telling us' (no. 96) – a possible reason for the frequency in which Sanders communicates climate policy in comparison to other candidates. Sanders morally frames climate change by appealing to intergenerational justice – politically intuitive given the context that children were the victims of the Water Crisis. The moderator challenged

Sanders' position on fracking by raising the fact that several Democratic governors supported such technologies, asked if they were wrong, a short 'Yes.' followed. Given stakeholder sensitivities, Sanders controls his communications by meeting challenging questions head on. His blunt 'yes' can be regarded as honest and by reiterating that fracking contaminates water supply, an emotional trigger in this arena, Sanders specifically attunes his climate and energy stances to stakeholder sensitivities. The eco-populist narrative comes through with Sanders' climate policy, he is able to contrast himself by painting Clinton as the establishment candidate with the establishment politics that have failed Flint.

The Republican debate did not take place in Flint, but Detroit, and was moderated by Fox. Unlike the Democratic debate; *there was no discussion or question on climate change in the 11th Republican debate*. The Republican Party has influenced agent-stakeholder dynamics by not entertaining a discussion on climate change and neither Trump nor Cruz make direct mentions to climate change. Consequentially, stakeholder diagnostics of climate change remain unchallenged, exacerbating partisan polarisation and the climate logic schism. One can speculate the saliency that Trump places on climate change through his free-market position on regulation: '[The] Department of Environmental Protection. We are going to get rid of it in almost every form. We're going to have little tidbits left but we're going to take a tremendous amount out'. This is later reiterated in his energy plan:

We'll solve real environmental problems in our communities like the need for clean and safe drinking water. President Obama actually tried to cut the funding for our drinking water infrastructure -- even as he pushed to increase funding for his EPA bureaucrats (No. 134).

The rejection of climate science is alluded to in '*real environmental problems*'. Much like Sanders, Trump also appeals to stakeholders by inferring to the Water Crisis and appropriating the blame at establishment and partisan politics.

The Flint Water Crisis reveals how candidates attune their climate policies to stakeholder interests. The more rigorous debate is found between the two Democratic contenders whereas little can be said on the Republican side. Institutional-stakeholder dynamics are influential in revealing and shaping candidates' climate communications, with the candidates subsequently framing climate stances by considering stakeholder interests in an attempt to control communications and adapt to contextual sensitivities. The role of institutions effects the deliberative quality on the issue of climate change. In this case, the Democrats entertain an open exchange of ideas in a democratic manner. On the other hand, the complete absence of the issue within Republican spheres only serves to exacerbate the existing logic schism. Reasons for the Republican's lack of coverage may be due to the decision to reflect membership concerns (Gallup, 2016). Frequency is a form of control. Sanders

controls his narrative by frequently communicating in climate frames. Trump and Cruz were able to control their narrative by minimising climate communications. Such framings were assisted by institutional-stakeholder dynamics as these views were either encouraged or went unchallenged in the sanctioned debates.

4.4 Clinton's "Greenpeace Gaffe" and the contested politics of divestment

In New York Clinton was questioned by a Greenpeace activist whether she would divest from fossil fuel campaign contributions. The response, caught on camera, showed a visibly angry Clinton accusing the Sanders campaign of lying about her despite the fact that there was no clear evidence that the activist was a Sanders supporter (Resnik-Day, 2016).

Since the gaffe on March 31st, there were little meaningful mentions of climate change from the Clinton campaign. Two press releases appear: one to critique Chinese industrial activity and another to contrast herself with Republican stances - interventionist and scientific certainty frames respectively. This can be construed as damage control as to mention climate change could inadvertently bring up the political-economy of fossil fuel campaign donations. The omnipresent influence of institutional-stakeholder dynamics ensured the incident was mentioned in the Brooklyn debate. Like Flint, Clinton attempts to control the scrutiny over her fossil fuel links by diverting stakeholder attention through interventionist frames and critique Sanders. Note the somewhat realist tone:

I want to do what we can do to actually make progress in dealing with the crisis... my approach I think is going to get us there faster without tying us up into political knots with a Congress that still would not support what you [Sanders] are proposing (no.22).

The Sanders campaign was quick to adapt by releasing two press releases the day following the gaffe. The first communication states that:

If you include money given to super PACs backing Clinton, the fossil fuel industry has given more than \$4.5 million in support of Clinton's bid. Bernie believes it is critical that the next president acts to curb the worst effects of climate change by acting boldly to move our energy system away from fossil fuels. He also believes you cannot take on an industry if you take their money (no.102).

The only reference to climate change is communicated in an interventionist frame, but the crux of the response lies in questioning the integrity of Clinton's climate pledges if the campaign takes money from vested interests. This is in direct contrast to the Sanders campaign which has explicitly rejected super PAC contributions as a cornerstone of the campaign (berniesanders.com, 2016). In the build-up to the debate four similar press releases make reference to Sanders' climate policies, primarily framed in moral and scientific frames. Sanders continues his attacks on Clinton and

reiterates the call for a moratorium on fracking, New York being a state that did just that (no.107). Energy and climate are again seen as mutually reinforcing in politicising the issue.

The Brooklyn debate saw Sanders repeat these attacks by highlighting the political economy of the Clinton campaign fundraising activities. This recurrence shows that, given the large stakeholder audience, debates represent the best opportunity to attack Clinton in comparison to the influence of press releases. Sanders boldly appeals to the democratic base by styling himself under FDR:

If we approach this... as if we were literally at a war — you know, in 1941, under Franklin Delano Roosevelt, we moved within three years to rebuild our economy to defeat Nazism and Japanese imperialism. That is exactly the kind of approach we need right now (no.109).

The second democratic debate supports this and shows Sanders' consistency on the issue. When asked if climate change represented the greatest threat to national security in light of the November Paris Attacks, Sanders doubled down and replied 'absolutely' (no.62). Sanders uses the Greenpeace Gaffe as the political opportunity to criticise Clinton's energy positions and legitimise his own by framing climate change existential threat to stakeholders. Climate stances underpin the wider consequences for energy policy here. Given the relatively low interest in climate change as an issue, Sanders frames the gravity of the situation in a way that most Americans are sensitive to— security issues (Gallup, 2016). There are differences in how the Democrats communicate the interventionist frame. Sanders considers climate change as 'the single greatest threat facing our planet' (berniesanders.com, 2016) whilst Clinton regards it as 'an urgent threat and a defining challenge of our time' (HillaryClinton.com, 2016). At the prompting of the Democratic Party, such discourse reveals to stakeholders who would be the more aggressive in implementing climate change legislation. The interventionist frame is most frequently invoked by both Democrats and the security category is the most communicated in the study. As the security category is again the product of morphogenetic cycles, a space for solution making could be fostered here. Arguably, a limit to this investigation does not reveal the diverging position *within* the security category or interventionist frame, suggesting further research need take place.

Clinton's Greenpeace gaffe served as a catalyst for increased frequency in climate mentions. Again, frequency is a form of communications control: Clinton's communication activity was relatively low, presumably in an attempt of damage control; whilst the Sanders campaign took advantage of the opportunity to simultaneously critique Clinton and present himself as the candidate serious about addressing climate change. The relationship between stakeholders, political actors and institutions explicitly reveals that security is a safer bet when framing climate change, at least in terms of resonating with voters.

5: Conclusion and Implications

In this study, we comprehensively coded and analysed statements from the U.S. Presidential Primaries to determine the frequency and content of material regarding climate change, with attention paid to the interaction with stated energy policies and the evolving morphology of energy frames. A total of 561 sources comprising of debates, campaign speeches and press releases were initially gathered over the 2016 presidential primaries. The final dataset was narrowed down to 134 sources that included one or more instance of climate change. The results indicate Sanders vastly “out-communicated” the issue than his opponents whilst very little climate communications were of Republican origin. The extent to which candidates regarded the issue of climate change as a source of political revenue is denoted by the frequency in which these worldviews are raised. Framing constructs and organises these worldviews in order to engage stakeholders. Three contextual drivers: COP21, the Flint Water Crisis and Clinton’s Greenpeace Gaffe served to illustrate how these frames were employed as a discursive strategy to appeal to stakeholders.

Frequency, control and institutional factors are mutually influencing in how different climate stances are formed. Frequency not only denotes the confidence candidates regard their climate stances as a “vote winner”, but is also a form of controlling the campaigns direction and narrative. The Republicans used their lack of communications as a form of control, whilst the Democrats increased communications to assert it.

We find that institutional-stakeholder-agency relations capture the dynamic processes of how climate and energy discourse is brought to light. The sanctioned Democratic debates have demonstrated how stakeholder sensitivities and positions on energy can influence candidates to adapt their campaign communications for fear of voter repercussion. The Republican debates were notable for the lack of climate questions, providing little scrutiny of the candidates’ climate positions. In this context climate policy is seemingly developed on the basis of what wins votes. Furthermore, politicians are not being significantly held accountable for these stances within important electoral processes. This is especially true for the Republican Party as the lack of climate discourse re-enforces voters’ pre-existing climate change realities as they remain unchallenged by alternative framings. The problem is frustrating circular.

Hoffman’s (2011) framing analysis provides the basis in which to resolve this stalemate by activating ‘broker categories’. The scientific category, where the debate is most contentious, determines the diagnostics of climate realities and leads to polarised remedies that should be avoided where possible. The study’s results show that the national security category was the most communicated climate stance. Security issues poll as a high concern amongst the electorate so it is logical for

climate communications to be framed in such a way to reach multiple stakeholder groups. The contextual drivers serve to illustrate how morphogenetic cycles produce this category as a means of influencing stakeholder awareness. Raising such awareness increases the deliberative quality on climate change, offering to make in-roads in achieving cross-party progress through consensus orientated politics. A distinct lack of deliberative quality only serves to exacerbate the logic schisms surrounding climate mitigation policies. This study proposes that the securitization of climate change provide a space where solutions may crystalize. However, this study is limited as further investigation is required in what common ground can be found *within* this category. Moreover, utilizing a security frame, or securitizing energy and climate discourses, do not come without risks. Oels (2012) warns that making climate a security issue can promote elitism and close it off from local populations; Kester et al. (2017) note that invoking a security logic can even be dangerous lead to hasty and unintended consequences.

The broader implications are clear: institutional-stakeholder influences are serious – some narratives need to be challenged (or merely present) in order to hold those running for office to account. Climate discourse needs to engage both sides of the aisle whilst avoiding divisive frames. A key challenge is to frame climate change under national security terms (particularly in Republican spheres) to influence morphogenetic processes and bring about meaningful climate dialogue and policy. The discourse constructing the securitization of climate change must be deliberative in order to promote consensus driven politics. Raising public awareness through climate discourse will bring more stakeholders into the discussion and overcome the logic schisms that render climate mitigation in policy limbo.

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